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ANGLESEY COUNTY COUNCIL /



ANNUAL REPORT
OF THE
PRINCIPAL
SCHOOL MEDICAL OFFICER
FOR 1956

G. WYNNE GRIFFITH,
Principal School Medical Officer
and
County Medical Officer.

ANGLESEY COUNTY COUNCIL

To the Chairman and Members of the Education Committee.

My Lord, Ladies and Gentlemen,

I have the honour to present the forty-fourth Annual Report of the School Medical Service in the County.

The health of the school population in so far as it can be measured by statistical indices continued to be satisfactory in 1956, and in the body of this report will be found several indications in support of this general conclusion.

The work of the school medical department proceeded smoothly during the year. I have in previous reports referred to what I consider to be serious gaps in the service we are at present able to provide, namely, the lack of staff for psychiatric social work and for speech therapy. With regard to the former, there is, happily, some improvement to report. The development of a comprehensive child guidance scheme for the North Wales area is progressing and we can expect to receive a better service in both psychiatric social work and educational psychology.

In an appendix will be found a report by Dr. G. A. V. Morgan, who is the Senior Educational Psychologist in the North Wales Child Guidance Service, on a survey of ability and attainment in schools in Holyhead and part of the Valley Rural District. This survey, the first I hope of many, enabled us with some certainty to find those children where more detailed testing was indicated with a view to placement in the day special school at Rhoscolyn. But, as a perusal of Dr. Morgan's report will show the survey had important implications of a more purely educational nature.

The prevention of tuberculosis in the school population continues to engage our attention. In the body of the report will be found a detailed account of the work of B.C.G. vaccination and mass radiography as applied to the school population.

Once again the report does not contain detailed reference to unsatisfactory and insanitary school premises. Routine reports on these matters are brought to the attention of the Director of Education from time to time following visits paid to the schools. A strongly adverse report had to be made during the year on the County Primary School at Cemaes. This is one of the few schools in the county which present serious sanitary defects.

A detailed investigation has been made into the condition of school canteens by the County Health Officer (Mr. I. Wynn Jones)

and the results of this survey are given in full as an appendix to this report. The picture on the whole is encouraging and the Authority can take pride in the standard of food hygiene observed in its canteens. There were of course defects found, but on the whole these were relatively minor and should be rectified fairly easily once attention has been drawn to them.

In the financial year 1956/57 the approximate gross cost of the school medical service amounted to £17,500, which is equivalent to an expenditure of 45s. 5d. per school child. After allowing for Government Grants the approximate rate-borne expenditure represented a rate of 2.9d. for the year, or an expenditure equivalent to 11s. per head of the school population.

I am indebted to the several consultants for the help they have readily given. It is a pleasure, too, to acknowledge the interest taken in the work by the Chairman and Members of the School Children Welfare Committee. I wish also to thank the Director of Education and his department for their valuable assistance, the Superintendent Nursing Officer, and the school nurses for their loyal services, and, not least, my professional colleagues and office staff for the excellence of their work and help in the preparation of this report.

I am,

Your obedient Servant,

G. WYNNE GRIFFITH,
Principal School Medical Officer.

June 1957

MEMBERS OF ANGLESEY EDUCATION COMMITTEE 1956/7

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Vice-Chairman : Mr. R. Davies, J.P.*†

Chairman of School Children Welfare Committee : Alderman H. R. Evans, J.P.

Vice-Chairman of School Children Welfare Committee : Mrs. E. G. Williams, J.P.

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| Mr. R. Jones. | Mr. Glyn Thomas. |
| *†Mrs. T. A. Jones. | *Mr. Griffith Thomas. |
| *Mr. T. Grey Jones. | Mr. J. Hugh Thomas. |
| *Mr. T. H. Jones. | Mr. David Thomas. |
| Mr. T. O. Jones. | *Mr. J. Hywel Thomas. |
| Mr. Wm. Jones. | †Principal Richard Thomas, M.A., |
| Mr. W. Pritchard Jones. | D.Sc. |
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Rev. D. M. J. Williams.

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Mr. J. Morris Williams.

*Mr. R. Pierce Williams.

Alderman W. D. Williams.

*Alderman W. O. Williams.

Sir Richard H. D. Williams-
Bulkeley, Bart., J.P.

*Member of the School Children Welfare Committee.

†Added member of the Education Committee.

Director of Education : E. O. Humphreys, M.A., B.Sc.

STAFF :

Principal School Medical Officer and County Medical Officer of Health. G. Wynne Griffith, M.D., D.P.H.

School Medical Officers (also Medical Officers of Health of County Districts). G. H. Browse Roberts, M.A., M.B., B.Ch., B.A.O., D.P.H., L.M.

W. Arthur Jones, L.M.S.S.A., D.P.H. (temporary). (Commenced 1.10.56).

School Medical Officers (also Asst. C.M.O.s of H.) Mrs. Mair Humphreys Jones, M.B., Ch.B., C.P.H.

Miss Meinir Morris, M.R.C.S., L.R.C.P. (Part-time temporary). (Left 29.2.56).

Principal School Dental Officer. O. C. Jenkins, L.D.S. (Eng.), D.D.S. (Toronto).

School Dental Surgeons. Elwyn Jones, L.D.S.
Mrs. C. M. Rolant Thomas, M.R.C.S., L.R.C.P., L.D.S.

Dental Attendants. Miss Gwen Jones.
Miss Sheila Lynch.
Miss Pat Randall.

Consulting Paediatrician. *Gwyn R. Griffith, M.D., F.R.C.P., D.P.H., D.C.H.

Chest Physician. *J. Glyn Jones, M.A., M.D., M.R.C.S., L.R.C.P.

Child Guidance Service

Consultant Child Psychiatrist	*E. Simmons, M.D., L.R.C.P., L.R.C.S. (Edin.), L.R.F.P.S. (Glasgow).
Registrar in Psychiatry	*J. Aled Williams, M.B., Ch.B., D.C.H.
Senior Psychologist	*G. A. V. Morgan, M.A., Ph.D.
Psychologists (part-time).	*Mr. W. R. Jones, M.A. *Mr. T. R. Miles, M.A.
Senior Psychiatric Social Worker.	*Mr. J. S. Midwinter.
Psychiatric Social Worker.	*Miss R. M. Oliver, B.A.
Consulting Ophthalmic Surgeons.	*T. G. Wynne Parry, M.R.C.S., L.R.C.P., D.O.M.S. *G. C. Laszlo, M.D. (Budapest), L.R.C.P. (Edin.), D.O. (Oxford)
Consulting Orthopaedic Surgeon.	*G. I. Roberts, M.B., Ch.B., M.Ch.Orth., F.R.C.S.
Consulting E.N.T. Surgeon.	*John Roberts, F.R.C.S.
Orthoptist.	§Mrs. G. Davies (<i>née</i> Powell).
Physiotherapists.	†§Miss G. N. Holme, M.C.S.P. †§Mrs. E. Hughes, M.C.S.P. †§Mrs. M. Jones, M.C.S.P. (Left 24.11.56.) †§Mrs. E. M. Tamblyn. (Commenced 17.12.56).

*Under contract with Regional Hospital Boards.

§Employed by the Caernarvon and Anglesey Hospital Management Committee.

†Part-time Staff.

Superintendent of School Nurses (also Supt. Nursing Officer). Miss H. V. Parry, S.R.N., S.C.M., Q.N., H.V. (Cert.).

Deputy Superintendent of School Nurses (also Deputy Supt. Nursing Officer). Mrs. M. Rh. Davies, S.R.N., S.C.M., H.V. (Cert.).

School Nurses.

Mrs. Cotgreave.
 †Miss Gwladys Hughes.
 †Miss E. C. Parry.
 †Miss E. C. Pritchard.
 †Miss G. Pritchard.
 †Miss A. Williams.
 †Miss M. C. Williams.
 †Miss E. Hughes.
 †Miss L. M. Jones.
 †Miss E. E. Hughes.
 †Also Health Visitors.

Chief Administrative Assistant. Horace Betts, D.P.A.

Clerical Staff.

Maldwyn Jones.
 Mrs. Eluned Griffith.
 R. J. Jones.
 Miss H. Roberts.
 Miss Eunice Jones.
 Miss E. M. Jones.
 Miss E. Lewis. (Left 19.1.56).
 Miss O. Ll. Edwards.
 Miss M. J. Jones. (Commenced 9.1.56).

REPORT OF THE PRINCIPAL SCHOOL MEDICAL OFFICER

THE RESULTS OF MEDICAL INSPECTION

The school population on 20th January, 1956, was :—

Primary Schools	5,250
Secondary Schools	3,263
Special School	58
Penhesgyn Open Air School	11
	<hr/>
	8,582
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The work of medical inspection is detailed in tables at the end of this report. The statistics reflect a satisfactory state of health among the school population. During the year there were 5 deaths of children aged 5 to 15 years (a death rate of approximately 0.6 per 1,000 school population per annum). The causes of death were: Aplastic anaemia (1), Peritonitis (1), Injuries (1), Sarcoma (1), Asphyxia due to immersion in water (1).

Details of notifiable diseases for the year are appended, showing the total occurring at all ages and the number among children of school age. The table includes cases diagnosed in Caernarvonshire hospitals and therefore notifiable to the Medical Officer of Health of the district in which the hospital is situate.

Disease	Urban	Rural	Total	No. of School-age Children
Diphtheria	—	—	—	—
Scarlet Fever	12	16	28	21
Ac. Poliomyelitis*.....	—	6	6	2
Ac. Pneumonia	1	5	6	—
Dysentery	3	9	12	2
Food Poisoning	1	—	1	—
Measles	26	178	204	113
Whooping Cough	20	12	32	14
Paratyphoid and Typhoid	—	1	1	—
Meningococcal Infections	1	1	2	1
Erysipelas	—	1	1	—
TOTAL	64	229	293	153

*1 Paralytic and 5 non-paralytic.

The main feature of the year's epidemiology was the extremely low incidence of infectious disease in the county—the lowest since

1936. There was a slight increase in *Scarlet Fever* as compared with the previous year, whilst there were 6 cases of *Poliomyelitis* (1 Paralytic) compared with 4 in 1955. *Measles*, *Whooping Cough* and *Dysentery* showed considerable decreases in prevalence compared with the previous year. For the seventh successive year there were no cases of *Diphtheria*.

School attendance was good. During the school year ended July 1956 the average attendance of children in the primary schools was 89.8 per cent., and in the county secondary schools it was 90 per cent. The corresponding figures for 1954/55 were 88.3 and 88 per cent. respectively.

The average attendance in the Day Special School for Educationally Sub-Normal Pupils was 91 per cent.

As will be seen from Table II A & B on pages 25 and 26 the commonest defects discovered at routine medical inspection are defects of vision, including squint and defects of the nose and throat. The relatively high number requiring treatment for lung complaints includes 69 children found to show a positive reaction to the multiple puncture test when undertaking the B.C.G. vaccination of school children. These were referred for X-ray examination (see pages 10-11). Minor orthopaedic departures from the normal, foot and postural defects, are frequently noted, but the severe crippling defect is happily not often seen. Otitis media continues to be numerically a minor problem, and a few cases only of the infectious skin diseases, scabies, impetigo and ringworm were discovered.

GENERAL CONDITION AND NUTRITION

The data relating to general condition and nutrition (to be found in Table II C on page 26) have been expressed as percentages in the table given below.

The figures in brackets are the findings last year. As there has been a change in the classification since last year, this year's "satisfactory" group corresponds to last year's groups A (good) and B (average) while the "unsatisfactory" group corresponds to last year's group C (poor).

ROUTINE MEDICAL INSPECTION 1956—CLASSIFICATION OF GENERAL CONDITION (PERCENTAGES)

	Satisfactory		Unsatisfactory	
Entrants	98.4	(98.6)	1.6	(1.4)
Primary School Leavers.....	99.3	(99.2)	0.7	(0.8)
Secondary School Leavers	98.6	(99.6)	1.4	(0.4)
Additional Group	98.2	(99.1)	1.8	(0.8)
ALL GROUPS	98.7	(99.1)	1.3	(0.9)

The percentage of children found to have "unsatisfactory" general condition has remained more or less constant in recent years.

The interpretation of these trends is not straightforward, especially as the classification is a purely subjective one, and medical officers vary in the standard they adopt.

The *Milk in Schools* scheme continued to operate satisfactorily. Every school is supplied with pasteurised milk in one-third pint bottles. Messrs. Cadbury Ltd., have agreed to continue this valuable service which the Milk Marketing Board had provided for many years.

The average number of meals served by the *School Meals Service* per school day was 6,485, and this number represents approximately 76 per cent. of the school population. The percentage for last year was 77.

Taking the number of meals provided as a yardstick, the Education Committee is undoubtedly the largest catering concern in the county, and the standard of food hygiene in school canteens is therefore a matter of considerable interest. When visiting schools the school medical officers pay particular attention to food hygiene in canteens.

The new Regulations relating to food hygiene in catering establishments which came into effect in 1956 (S.I. 1955 No. 1906) apply to school canteens in whole or in part. At my request the county health officer (Mr. I. Wynn Jones) undertook a survey of all school canteens to see what would be needed in order to comply with the new requirements. His report is to be found as an appendix to this report (page 31).

TUBERCULOSIS

Notifications of Tuberculosis :

During the year 15 cases of tuberculosis were notified among children of school age.

The form taken by the disease in this series was as follows :

(The numbers in brackets are the corresponding figures for 1955):

Non-respiratory forms	1	(3)
T.B. kidney	1	
Adult type respiratory tuberculosis	9	(6)
Primary chest infections	5	(6)

The two main weapons on which we rely to prevent the spread of tuberculosis in the school population are B.C.G. vaccination and mass radiography examination. These two weapons are best used in conjunction and in previous reports a detailed account has been given of the scheme that is operated in this county.

In 1956 the scheme operated again in a very satisfactory manner. Unless there was some contra-indication, every child was tuberculin tested in his 14th year by the Heaf M.P. method; negative reactors were vaccinated and positive reactors were X-rayed. The testing and vaccination sessions were arranged to coincide with the visits to the schools of the mass radiography unit. In this way the interval between finding a positive reactor and having his chest X-rayed was eliminated. The importance of this from the point of view of relieving parental anxiety is obvious.

B.C.G. Vaccination.

In the county secondary schools there were 688 children aged between 13 and 14 years on roll. In the case of 29 children the tuberculin state was already known as the result of our contact tracing procedure.

Notified in the past as suffering from tuberculosis	1
Known to have had a healed primary lesion	2
Known to be tuberculin positive	10
Had already had B.C.G. as contacts	16

Forms of consent were sent to the parents of the remaining 659 children and were duly returned for 448 children, but some of these were absent when the testing was done or when the tests came to be read. Results were thus available for 426 of whom 82 (or 19.2 per cent.) were found to be positive reactors. The remainder—344 were vaccinated.

The limits that can be set for the proportion of children in this age group with naturally acquired tuberculin sensitivity are 21.1 per cent. to 23.4 per cent. (The method of calculating these limits is given in last year's report.)

In addition, 67 cadets of H.M.S. "Conway" were tested, of whom 22 were positive reactors. The remaining 45 were vaccinated.

The 104 positive reactors (82 school children and 22 cadets) were examined by the mass radiography unit and where necessary by the chest physician. Two of these were subsequently notified as suffering from tuberculosis and another is still under observation at the clinic.

Mass Radiography :

In addition to examining the children found to be positive reactors on testing prior to B.C.G. vaccination the mass radiography unit examined all children aged 14 years and over as well as the school staff (teaching, domestic and canteen). H.M.S. "Conway" also received a visit during 1956.

The results are set out in full in the following table. The survey resulted in the finding of one new case of pulmonary tuberculosis among the children. Of the staff, two are still under observation but no new cases were brought to light.

MASS RADIOGRAPHY—1956

	Total exam- ined	Abnor- malities other than Tuber- culosis	Referred to Chest Physi- cian	Results of Further Investigation by Chest Physician					
				New Case	Already known	Heal'd Res- pir- atory T.B.	Other abnor- mal- ity	No. abnor- mal- ity	Failed to attend
Second'y.. School Children aged 14 plus	1,255	12	37	1	—	6	3	23	4
School Staffs.	547	25	17	—	—	4	2	7	4
H.M.S. <i>Conway</i>	299	3	3	—	—	—	—	3	—

THE WORK OF THE SCHOOL NURSE

The work done by school nurses in the prevention of infestation with vermin deserves high praise. The nurses made 40,718 inspections, which is equivalent to every child being examined on the average five times during the year. The number found to be verminous was 245, or 2.9 per cent. of the school population. This shows a slight increase over last year. The figures for the past five years are as follows : 1952, 98 cases ; 1953, 105 cases ; 1954, 211 cases ; 1955, 199 cases.

Our arrangements for dealing with this condition were reviewed during the year.

The table printed below gives some indication of the volume of work done by the school nurse/health visitors.

	No. of schls. in district	Total average att'dance	No. of Exam- inations	No. of visits to homes	No. of visits to schools
Amlwch	5	1,066	5,325	23	92
Beaumaris	5	912	3,436	86	72
Bodedern	6	455	2,671	85	72
Bodorgan	5	349	2,490	123	60
Holyhead	11	2,237	10,849	949	240
Llanfechell	8	391	4,120	47	127
Llangefni	6	1,215	2,914	19	105
Marianglas	6	318	2,748	156	113
Menai Bridge	3	384	3,355	17	87
Newborough	6	391	2,810	170	105
TOTAL	61	7,718	40,718	1,675	1,073

The school nurses still attend to minor ailments when required, and the majority of the 476 cases noted in Group 7 of the Treatment tables (Table III, page 27) were, in fact, seen by the nurses. These include the abrasions, bruises, cuts, stings and similar happenings of school life which call for sympathetic attention. We are fortunate in that impetigo, ringworm and scabies are still being encountered but rarely.

MOBILE MINOR AILMENTS CLINIC

As was suggested in previous reports, this vehicle is rather inappropriately named. It has been used mainly as an "examination room on wheels".

Some details concerning the work of the clinic during the year are given below :—

Number of visits to schools	404
Mileage covered	7,506
Number of minor ailments treated	194
Number of routine cleanliness, etc., inspections made...	22,798
Number of children seen for other reasons	70
Total number of children seen	23,062

It will be noted that 56 per cent. of all cleanliness inspections are carried out in the mobile clinic.

ORTHOPAEDIC CARE AND AFTER-CARE

The following table sets out the work done by the physiotherapists :—

Centre	No. of Clinics held	No. of Home Visits	No. of Cases	No. of Treatments	U.V.R.	
					No. of Cases	No. of Treatments
Holyhead	128	—	257	1,609	30	271
Llangefni	93	—	68	1,257	10	184
Amlwch	69	12	76	986	11	108
Menai Bridge	47	2	43	254	2	6
Beaumaris	88	1	61	700	4	39
	425	15	505	4,806	57	608

	Orthopaedic and other	U.V.R.
Total number of cases on the books.....	637	66
Total number of cases discharged	297	33
Number of new cases	264	22

Breathing exercises, etc., have also been given in the five clinics to 94 cases referred by hospitals.

During the year 477 attendances were made by 307 individual children at the 11 Orthopaedic Clinic sessions held at Holyhead and Llangefni, an average attendance of 43 per session.

PHYSICAL EDUCATION

I append the report of the Physical Training Organiser :—

“Physical Education is being carried out conscientiously in the county and on the whole the standard of work is fairly good. Naturally in some instances the work is not carried out daily owing to the lack of indoor facilities during inclement weather.

More schools have been equipped with small apparatus, and the following schools were supplied with agility frames: Aberffraw, Bodffordd, Llanbedrgoch, Llanfairpwll and Talwrn. These frames are in constant use and give the teachers and children more scope in the type of work suitable to age, ability and achievement.

Plimsoll shoes were also supplied to the schools this year and again good use is made of these. It is easy to understand why the schools require a replenishment each year, as these shoes wear out

quickly when in constant use in the playground during the Physical Education period, for which purpose they should only be worn. Unfortunately the demand is greater than the supply, and the Secondary Schools do not receive an adequate number of shoes, but I feel justified in trying to see that nearly every child in the Primary Schools is equipped at the expense of the large Secondary Schools as the Primary Schools have a daily lesson in comparison with the few gymnastic periods the Secondary School children have.

Mr. J. W. Ll. Alford, the Amateur Athletics Association National Coach, visited the county on Thursday and Friday, 26th and 27th January, to take a Coaching Course for teachers and promising athletes in the Secondary Schools. The following are details of his coaching :

Holyhead County Secondary School :

26th January, 9.30 a.m. to 12 noon, 1.30-4 p.m.—Sprint starts, hurdling, hop, step and jump, long jump, discus, javelin and shot.

Sir Thomas Jones School, Amlwch :

27th January, 9.30 a.m.-12.30 p.m.—Sprint starts, high jump (Western role), discus, javelin and shot.

Beaumaris County Secondary School :

1.30-4.30 p.m.—Long jump, hop, step and jump, discus, javelin and shot.

Coaching films, training techniques and style were also shown and discussed, and I feel sure that such a course as this helps the teachers and myself in coaching techniques in these specialised events as now practised in the schools.

The benefit to the children is obvious as results in athletics show. The achievement of the County's Secondary Schools is to be commended this year. The standard of athletics and games is rising steadily and it may interest the Committee to know some of the activities.

The Annual County Secondary Schools Championships were held at the Sir Thomas Jones School, Amlwch, on June 6th, where there are good facilities for holding such an event. The meeting was held in a very high wind, but none the less 13 county records were broken and two equalled. For the first time field events for girls and hurdles events for boys and girls were introduced. The only event which is not included is pole vaulting owing to lack of facilities at Beaumaris, Holyhead and Llangefni and the high cost of purchasing the equipment in the case of Amlwch.

For the ninth successive year Holyhead Secondary School won all four sections (Lower Junior, Junior, Middle and Senior) and so retained the Hines Challenge Shield and the Hines Relay Cup. Aggregate points were as follows :

Holyhead 308½ ; Beaumaris 194 ; Amlwch 188 ; Llangefni 143½.

It was a successful day judging from the performances, and thanks are expressed to the Director of Education, the President of the Anglesey Secondary Schools Sports Association, for presenting the trophies to the winning school ; to Mr. H. L. Rees, Senior Physical Education Lecturer, Bangor Normal College, the Referee and the Headmaster and the Staff of the Amlwch School for making the meeting such an enjoyable one.

Arising from the results of the County Championships a County team was chosen to represent Anglesey in the National Championship at Swansea on July 14th. The team comprised of boys and girls and numbered 42. The competition was keen and the standard was high and it is gratifying to note that Anglesey set up 3 records :

100 yds. Senior Boys (in heats).

440 yds. Senior Girls Relay (in heats).

$\frac{3}{4}$ mile Middle Boys Walk (in final).

Dewi Roberts, Beaumaris, won the 220 yds. Senior Boys ; Gwyneth Lewis, Holyhead, the 100 yds. Senior Girls, and Michael Healy the Middle Boys Walk. The overall girls results were promising, and as this was the first year we competed in all events there should be a marked improvement in the future, and we gained 23 places and 22 standards which is quite good.

Besides inter-school activities, Anglesey has two outstanding athletes of National class :

Gwyneth Lewis, Holyhead, who is the Welsh Senior Women's 100 yds. champion, and Dewi Roberts who is the Welsh Junior 100 yds. champion. These two, together with Beryl Turner, Holyhead, have been chosen to undergo further coaching in view of the selection of the Welsh Athletics team for the Empire Games, Cardiff, 1958. Dewi Roberts also ran for North Wales against Liverpool at Colwyn Bay on September 8th and won his event. Anglesey should be proud of these young athletes.

The football season saw the Anglesey Junior XI play well, particularly in the Welsh Shield competition, which is played on a home and away basis. In the first round Anglesey beat Arvon and South Arvon and entered the quarter-finals against Chester. The first game was played in Chester, where Anglesey was beaten 3-1. The return match was played at Holyhead, where Anglesey schoolboys beat Chester 4-3. Unfortunately the aggregate score determined that

the Chester team progressed to the semi-finals. As a result of these games two boys, Ian Furlong and Norman Owen, both from Llangefni County Secondary School, were chosen for the Welsh trial game, but were not capped. At the beginning of the season in December the team did not do so well, being knocked out in the first round of the Welsh Shield matches. Although the team was not successful, two boys must be mentioned—D. H. Williams and J. E. Williams of Beaumaris, who have been selected to play in the final Welsh trial match in Newport on 9th February, 1957.

The Eirlys Roberts Football Shield was won by Llangefni County Secondary School for the second year running, being top of the Junior Football League.

One other sporting activity which an Anglesey school has participated in for the first time ever is cross country running. The Llangefni County Secondary School team was placed second in the North Wales Cross Country Championships in the spring, and is to be congratulated on this achievement despite heavy competition.

It is heartening to know that the Secondary Schools are broadening their activities and doing so well with the facilities at hand, and to note that the work done in the county follows a co-ordinated plan from the primary schools to the secondary schools.

EIRLYS W. ROBERTS."

DEFECTIVE EYESIGHT AND SQUINT

The ophthalmic services for school children is provided through the hospital authorities and during 1956 certain difficulties were encountered. The provision of additional hospital beds for this speciality resulted in increased demands on the time of the consultant staffs so that the number of clinic sessions devoted to school work fell from 54 to 47 with a corresponding drop in the number of children seen for refraction from 712 in 1955 to 662 in 1956. The waiting list for appointments had increased by the end of the year until it involved a delay of nearly 6 months. Representations were made to the Welsh Regional Hospital Board and the Board recognizing the need for additional staff have approved the appointment of a senior hospital medical officer in ophthalmology.

Although the provision of additional beds resulted in delays in the clinics at the same time there was, as a result, an improvement in another direction, i.e., in the operative treatment of squint. Compared with 11 cases operated upon in 1955, 20 cases were treated in 1956—all at the Caernarvon Eye and Cottage Hospital.

Prescriptions for glasses were issued at the clinics to 557 children, and 537 of these had been supplied by the end of the year.

Orthoptic Treatment was available at Bangor and at Holyhead, the orthoptist (Mrs. Gwyneth Davies) being employed by the Caernarvon and Anglesey Hospital Management Committee.

In January 1956 the number of Anglesey children receiving treatment was 142, and 16 new cases were registered during the year. The number of cases discharged from treatment was 21, of whom 12 were considered to have been cured and 9 were cosmetically satisfactory. Only 2 cases were discharged for failure to attend. The nature of the treatment given may be indicated as follows :—

	<i>Per cent. of Cases</i>
Occlusion.....	35
Exercises	22
For Operation	27
Kept under Observation	16

The school nurses continued to test the eyesight of 7 year-old children and to refer doubtful cases for the opinion of the school doctor. This form of screening can be valuable in detecting defective vision at an early stage. During the year 474 children were tested by the nurses and 69 referred for further examination. In addition the school nurses test the corrected vision of children wearing glasses and if in doubt about the suitability of the spectacles refer the case for further examination. During 1956 they examined 446 such children and referred 126 to see the school doctor.

DISEASES OF THE EAR, NOSE AND THROAT

All consultations and operations for conditions of the ear, nose and throat are held at the Caernarvon and Anglesey Hospital, Bangor.

These are among the commonest causes of ill-health among children, and during the year 118 cases were referred for a specialist opinion, and 113 cases were operated upon, mostly for the removal of tonsils and/or adenoids.

The position regarding the availability of these services is indicated below :

Number of children waiting :—

	(a) Consultation	(b) Operation
At 31/12/56	25	6
At 31/12/55	—	6

These figures show that the position both for consultation and for operation is still satisfactory.

At the present time the waiting period is only a week or two unless some exceptional circumstances arise.

Tonsils and Adenoids :

At the request of the Principal Medical Officer, Ministry of Education, a note was made at all periodic medical inspections during 1956 whether the child had had the tonsils and adenoids removed. The results were as follows :

Age Group.		No. examined.	No. who had had operation	Percentage
Entrants	Boys	449	11	2.4
	Girls	501	17	3.4
Second Age Group	Boys	385	37	9.6
	Girls	371	26	7.0
Third Age Group	Boys	489	77	15.7
	Girls	539	95	17.6

The differences between the sexes are minor but, as would be expected, the proportion of children operated upon increases with age.

HANDICAPPED PUPILS

Category	Number ascertained during the year 1956	No. on the register of H.P.s at 31/12/56
Blind	—	2
Partially sighted.....	1	5
Deaf	2	5
Partially Deaf	—	8
Delicate	1	8
Educationally sub-normal	17	141
Epileptic	2	3
Maladjusted	1	5
Physically handicapped.....	—	7
Multiple Defects	1	4
Speech Defects	1	15
	<u>26</u>	<u>203</u>

Number of cases dealt with during the year under the Education Act, 1944 :

Section 57 (3).....	—
Section 57 (5).....	1

Much work was done during 1956 in the ascertainment of handicapped pupils and at the year's end the number of such pupils on the register was 203.

The number of children ascertained as being handicapped by reason of speech defect is 15. No doubt there are several more such children who would be brought to notice were facilities for treatment easily available.

The following table shows the number of pupils admitted to special schools during the year and the number in attendance at such schools on the 31st December :

Category	No. admitted 1956	No. in att'ce at Dec. 31	No. waiting adm. Dec. 31
Blind	—	1	1
Partially Sighted	—	1	—
Deaf	1	4	1
Partially Deaf	—	1	—
Delicate.....	2	3	2
Educationally Sub-normal ...	13	65	39
Epileptic	1	2	1
Maladjusted	1	5	—
Physically Handicapped	1	3	—
Multiple Defects	1	4	—
Speech	1	1	—
TOTALS	21	90	44

Defective Hearing :

There were 5 deaf pupils on the register at the end of the year and 8 partially deaf children. There is reason to think that some pupils suffering from defects of hearing are not being discovered. In a recently published Scottish survey it was found that 5.3 per 1,000 pupils suffered from hearing defects of moderate or severe degree. On that basis there should be 45 or so such children in Anglesey compared with the 13 we know about.

The best way at present available to screen large numbers of children so as to discover those needing further investigation is by means of the so-called pure tone sweep audiometer. The Committee should consider whether regular audiometric surveys should not be instituted as one of the next developments of the school health service.

Rhoscolyn Day Special School :

This junior day special school, under the Headship of Mr. T. H. Breese, continued to function satisfactorily during 1956. There were 45 children on the roll at 31st December, 1956. There can be no doubt in the minds of anyone who has watched these children that the school is doing excellent work. The children are obviously happy there, they are more alert and take greater pride in their person

and clothing than was the case when they attended ordinary schools. Mr. Breese and his staff are succeeding, too, in the more limited academic sense and several children have "caught up" to a surprising degree with basic arithmetic and language. The committee can look forward confidently to the time when the school's future has been settled and the way is clear for future development of this much-needed provision.

Penbesgyn :

Penbesgyn is a small sanatorium for girls of school age suffering from tuberculosis (normally of the "primary" type of lesion). This institution is managed by the Caernarvon and Anglesey Hospital Management Committee, but the Anglesey Education Authority is responsible for the provision of education facilities. On the 31st December, 1956, there were 11 children in the hospital, 7 being Anglesey cases. One of the school dentists pays periodical visits.

Child Guidance :

Children showing evidence of being emotionally disturbed are referred to the Child Guidance Clinic which is held at Bangor under the direction of a consulting child psychiatrist on the staff of the North Wales Hospital for Nervous and Mental Disorders, Denbigh.

In addition, a clinic was started in Holyhead during 1956 attended by an educational psychologist and psychiatric social worker.

Details of the work done by this service are given below :

NORTH WALES CHILD GUIDANCE CLINICS

Anglesey Children dealt with during 1956

1. At Clinics—number of attendances :

Clinic	Psychiatrist (children)		Psychologist (children)		P.S.W. (Parents and/or Guardians)	
	First	Further	First	Further	First	Further
Bangor.....	33	92	36	37	39	71
Holyhead	—	—	5	88	3	78
Totals	33	92	41	125	42	149

Individual Children seen : 42 First, 22 Further ; Total 64.

2. Elsewhere—number of visits :

Psychiatric Social Worker.		Psychologist.	
Home Visits	Visits to other Social Workers	School Visits	Visits to other Social Workers
10	1	18 10 <i>For Special Testing :</i>	1 9
10	1	28	10½

3. Number of Referrals received during 1956 :

Name of Referring Agency.	Number of Referrals
School Medical Officer	43
General Practitioners	9
Consultant Paediatricians	6
Courts and Probation Officers	3
	61

Educational Testing :

A survey of all primary schools in the catchment area of Rhoscolyn Day Special School was conducted during the year by Dr. G. A. V. Morgan (Senior Psychologist). The main purpose of the survey was to discover those cases that needed further detailed investigation with a view to admission to the special school if that course was warranted. A full report by Dr. Morgan on this survey and its findings is printed as an appendix to this report (page 41)

DENTAL SERVICE

As can be seen from the statistics relating to dental work on page 28 (Table IV) 97 per cent. of the school population were inspected at least once during the year.

As usual, dental defects were found to be very common, 76 per cent. of the children examined being considered in need of treatment.

Mr. O. C. Jenkins reports :

"The Authority's dental service was once again up to establishment during 1956.

The statistics relative to dental inspection and dental treatment during the year will be found in Table IV and from them it

will be seen that 97 per cent. of the school population were dentally inspected. Those that needed treatment numbered 76 per cent.

In addition to the routine dental inspection, Dr. C. M. Rolant Thomas was occupied with the second year survey in connection with the fluoridation scheme. Miss Oswald from the Ministry of Health carried out a similar survey in the Holyhead schools.

In the report of the other dental officers it will be noticed that they have once again observed the low average of oral hygiene practised by the school children. We have tried to counter this by talking to them on the need of using a toothbrush—perhaps we will not reap all the fruit of this teaching in the present generation. We can only stress once more that a great deal can certainly be done by both the child and the parent in helping prevent or reduce dental decay—eat more of the correct foods and avoid the wrong foods which are usually too frequent sweets and the starch foods, make good use of the toothbrush after meals, and vigorously rinse the mouth always after eating. We still hear of children who clean their teeth before going to bed and then all is spoiled by their being given a sweet or a biscuit to munch by an ill-advised parent as a night cap.

In closing I would again like to express my thanks to the head teachers and staffs of the Authority for their continued valuable help and co-operation during the year.

Dr. C. M. Rolant Thomas reports :

‘The second survey in connection with the fluoridation scheme in Anglesey took place during the summer of 1956 concurrently with the routine dental inspection of all school children. As in the “base-line” survey of 1955, the children selected ranged from 3 to 15 years of age, and all fulfilled the essential requirements for this demonstration study, regarding the locality of their homes and schools, sources of water supplies there, and duration of residence at their homes. A special study was again made in Holyhead of children aged 3-11 years.

The routine of the survey was similar to that of the previous year. A new factor was introduced in the visit to Anglesey of Mr. Geoffrey Slack (of the School of Dental Surgery, Liverpool University) who examined and charted the teeth and oral condition of about 130 children, who were also due to be seen in the course of the survey. He also visited the demonstration areas in England while the surveys were in progress, examining similar groups and so checking the accuracy of the examinations made by the local observers of each area.

During the year I also visited the schools of my area to give dental treatment. Amongst the children of school age the standard of oral hygiene is still low, though I notice a very gradual improvement during the past 15 years. On the whole, girls have a better standard of "clean teeth and mouths" than boys, but both boys and girls are equally addicted to eating sticky sweets and biscuits at all times of day, and are unaffected by all lectures and warnings on the subject. The demand for conservative treatment of temporary and permanent teeth is a welcome sign that some parents take an interest in their children's teeth; but there will always remain those few with whom no progress can be made. With regard to younger children, I should like to stress the importance of making the pre-school group familiar with a dental surgery so that they have no fear of dental examination, and treatment can be approached gradually. Parents are encouraged to bring their small children to the dental clinics in the schools and can arrange to come at times to suit their own convenience.

I wish to thank the head teachers and their staffs for most helpful co-operation and the health visitors for much appreciated assistance during the survey.'

Mr. Elwyn Jones reports :

'The dental condition of Anglesey's school children still remains very poor. The cause is, as in previous reports, lack of cleaning. Most children have tooth brushes, but it is a different tale how often they are used. If only children would spend two minutes in the morning and two minutes last thing at night cleaning their teeth I am sure there would be some improvement.

Some parents could do a lot to help in this. Unfortunately, so long as a child is free from dental pain, very little thought is given to the mouth, though there may be several bad teeth present. Dental treatment is often refused because the child does not wish it and the parent will sign the consent form as a refusal to keep peace in the home.

Parents should also realise the importance of *regular* treatment. Often a child has treatment, but in the subsequent two or three years will refuse it with the usual results.

I wish to record my thanks to the nursing and teaching professions for their help and co-operation in carrying out inspection and treatment. They are always anxious and willing to do all they can.'"

MEDICAL INSPECTION RETURNS

Year ended 31st December, 1956.

TABLE I.

Medical Inspection of pupils attending Maintained Primary and Secondary Schools (including Special Schools).

A.—Periodic Medical Inspections.

Number of Inspections in the prescribed groups :

Entrants	950
Primary School Leavers	756
Secondary School Leavers	1,028
Total	2,734
Additional periodic inspections	163
Grand Total	2,897

B.—Other Inspections

Number of Special Inspections	693
Number of Re-Inspections	1,716
Total	2,409

C.—Pupils Found to Require Treatment

Number of individual pupils found at Periodic Medical Inspection to require treatment (excluding Dental Diseases and infestation with Vermin) :—

Group	For defective vision (excluding squint)	For any other conditions recorded in Table IIA.	Total individual pupils
Entrants	13	135	148
Primary School Leavers	52	80	124
Secondary School Leavers ...	82	73	150
Total Prescribed Groups	147	288	422
Additional periodic Inspections	6	10	14
GRAND TOTAL	153	298	436

TABLE II.

Return of Defects found by Medical Inspections.

A. Periodic Inspections.

Defect Code No.	Defect or Disease	Periodic Inspections .				TOTAL (including all other age groups inspected)	
		Entrants		Leavers		Req'ing T'ment (7)	Req'ing Obs. (8)
		Req'ing T'ment (3)	Req'ing Obs. (4)	Req'ing T'ment (5)	Req'ing Obs. (6)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
4	Skin	7	6	5	4	15	17
5	Eyes :						
	a. Vision	12	7	82	45	153*	76
	b. Squint	19	35	4	7	34	49
	c. Other	6	8	6	—	18	9
6	Ears :						
	a. Hearing.....	—	3	—	2	1	7
	b. Otitis Media	—	3	2	1	2	5
	c. Other	—	2	—	—	1	2
7	Nose and Throat.	33	98	11	7	52	120
8	Speech	2	4	—	7	3	5
9	Lymphatic Gland	8	27	2	5	13	43
10	Heart	2	10	1	4	3	15
11	Lungs	14	24	3	4	26	32
12	Developmental :						
	a. Hernia	4	—	1	—	6	—
	b. Other	2	17	7	3	11	24
13	Orthopaedic :						
	a. Posture ...	2	1	9	3	18	4
	b. Feet	12	9	14	16	41	38
	c. Other	12	16	3	2	19	21
14	Nervous system:						
	a. Epilepsy ...	—	2	—	2	—	5
	b. Other	—	1	—	1	—	2
15	Psychological :						
	a. Development	—	—	—	1	—	1
	b. Stability	2	6	2	1	6	8
16	Abdomen	—	2	2	4	7	2
17	Other	38	40	8	26	62	79

TABLE II (*Continued*)

B. Special Inspections.

Defect Code No. (1)	Defect or Disease (2)	Special Inspections.	
		Requiring Treatment (3)	Requiring Observation (4)
4	Skin	9	6
5	Eyes : a. Vision	204	108
	b. Squint	38	34
	c. Other	18	5
6	Ears : a. Hearing.....	12	12
	b. Otitis Media	—	3
	c. Other	1	2
7	Nose and Throat	51	59
8	Speech	5	4
9	Lymphatic Glands	19	26
10	Heart	2	9
11	Lungs	117	27
12	Developmental :		
	a. Hernia	1	3
	b. Other	5	10
13	Orthopaedic :		
	a. Posture	3	6
	b. Feet	15	18
	c. Other	12	11
14	Nervous system :		
	a. Epilepsy	1	4
	b. Other	—	—
15	Psychological :		
	a. Development	74	—
	b. Stability	53	5
16	Abdomen	3	3
17	Other	54	59

TABLE II (*Continued*).

C.—Classification of the General Condition of Pupils Inspected during the year in Age Groups

Age Groups Inspected.	No. of pupils Inspected	Satisfactory		Unsatisfactory	
		No.	% of Col. 2	No.	% of Col. 2
1	2	3	4	5	6
Entrants	950	935	98.4	15	1.6
Primary School Leavers	756	751	99.3	5	0.7
Secondary School Leavers	1,028	1,014	98.6	14	1.4
Additional Periodic Insps.	163	160	98.2	3	1.8
TOTAL	2,897	2,860	98.7	37	1.3

TABLE III.

TREATMENT TABLES

Group 1—Eye Diseases, Defective Vision and Squint :

External and other, excluding errors of refraction and squint	72
Errors of refraction (including squint)	662
Total	734
No. of Pupils for whom spectacles were prescribed	557

Group 2—Treatment of Defects of Ear, Nose and Throat :

Received operative treatment :	
(a) for diseases of the ear	1
(b) for adenoids and chronic tonsillitis	6
(c) for other nose and throat conditions	107
Received other forms of treatment.....	42
	156
Total number of pupils in schools who are known to have been provided with hearing aid :	
(a) in 1956	—
(b) in previous years	1

Group 3—Orthopaedic and Postural Defects :

Number of pupils known to have been treated at clinics or out-patient departments	321
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Group 4—Diseases of the Skin (excluding uncleanness, for which see Table V).

	No of cases treated or under treatment during the year by the Authority.
Ringworm—Scalp	—
Ringworm—Body	—
Scabies	—
Impetigo	—
Other Skin Diseases	—

Groups 5 and 6—Child Guidance Treatment and Speech Therapy :

(a) under Child Guidance arrangements	48
(b) under Speech Therapy arrangements	—

Group 7—Other Treatment given :

(a) Miscellaneous Minor Ailments	476
(b) Pupils who received convalescent treatment under School Health Service arrangements	—
(c) Pupils who received B.C.G.	403
(d) Other :	
(i) Pupils given Halibut Liver Oil	189
(ii) Pupils given Breathing Exercises	94
(iii) Pupils given Ultra Violet Light	57

TABLE IV.

Dental Inspection and Treatment.

1. No. of pupils inspected by the Authority's Dental Officers :	
(a) Periodic age groups	8,282
(b) Specials	60
(c) Total (periodic and specials)	8,342
2. No. found to require treatment	6,331
3. No. offered treatment	6,331
4. Number actually treated	3,732
5. Attendances made by pupils for treatment	5,345
6. Half-days devoted to : Inspection	164
Treatment	957
Total	1,121
7. <i>Fillings</i> : Permanent Teeth	3,295
Temporary Teeth	921
Total	4,216
8. <i>No. of teeth filled</i> : Permanent Teeth	2,911
Temporary Teeth	861
Total	3,772
9. <i>Extractions</i> : Permanent Teeth	524
Temporary Teeth	3,491
Total	4,015
10. Administration of general anaesthetics for extraction	1
11. Orthodontics :	
(a) Cases commenced during the year	1
(b) Cases carried forward from previous year.....	15
(c) Cases completed during the year	1
(d) Cases discontinued during year	1
(e) Pupils treated with appliances	7
(f) Removable appliances fitted	1
(g) Fixed appliances fitted	—
(h) Total attendances	30
12. Number of pupils supplied with artificial dentures	—
13. Other operations : Permanent teeth	400
Temporary teeth	26
Total	426

TABLE V.

Infestation with Vermin.

i.	Total number of examinations in the Schools by School Nurses or other authorised persons	43,615
ii.	Total number of individual pupils found to be infested	245
iii.	Number of individual pupils in respect of whom cleansing notices were issued (Sect. 54 (2) Education Act, 1944)	160
iv.	Number of individual pupils in respect of whom cleansing orders were issued (Sect. 54 (3) Education Act, 1944).....	7

APPENDIX.

SCHOOL CLINICS

The present arrangements regarding school clinics are as follows :

A. Local Education Authority Clinics.

<i>Type.</i>	<i>Location.</i>	<i>Sessions.</i>
1. Dental.	(a) Park School House, Holyhead	Daily when S.D.O. is operating in Holyhead.
	(b) Two Mobile Clinics are used in the Eastern and Central Sectors of the Island.	
2. Minor Ailments.	(a) St. Cybi Infants' P.S., M.I. Room.	Tuesday afternoons.
	(b) Mobile Clinic.	Daily.

B. Clinics run by the Local Education Authority on behalf of the Regional Hospital Board on Local Education Authority Premises.

1. Ophthalmic.	(a) County Secondary School, Amlwch.	An average of 1 clinic per week is held in the County, alternating between the various centres according to the numbers awaiting treatment in the four catchment areas.
	(b) Old Gaol, Beaumaris.	
	(c) St. David's Priory, Holyhead	
	(d) Frondirion Clinic, Llangefni.	
2. Orthoptic.	St. David's Priory, Holyhead.	Alternate Tuesdays.
3. Orthopaedic.	(a) St. David's Priory, Holyhead	Once monthly alternately.
	(b) Frondirion Clinic, Llangefni.	
4. Physiotherapy.	(a) County Secondary School, Amlwch.	Wednesday afternoons and Friday mornings.
	(b) Old Gaol, Beaumaris.	Tuesday and Friday mornings.
	(c) St. David's Priory, Holyhead	Monday afternoons. Wednesday mornings. Friday afternoons.
	(d) Frondirion Clinic, Llangefni.	Monday and Thursday mornings.
	(e) Y.W.C.A., High St., Menai Bridge.	Thursday afternoons.
5. Child Guidance.	St. David's Priory, Holyhead.	Every Friday.

SCHOOL CANTEENS

Report on Inspection during Christmas Term, 1956

By I. Wynn Jones, County Health Officer.

I would first of all like to congratulate the supervising and cooking staff on the high standard of cleanliness and general hygiene maintained in the school canteens. This standard compares very favourably with that I have encountered elsewhere. Secondly, I would express my appreciation to the canteen staffs for their courteous reception, indeed I would say, welcome, during my visit. Nothing appeared to be too much trouble in assisting me on this, my first tour of inspection. The Local Education Authority is fortunate in having so many cooks and helpers of long service with the Authority. This helps to maintain a high standard, and training in food hygiene and its principles is more easily put into practice. I refer to this in contrast to the seasonal staffs at holiday resorts, where staff changes are frequent even during the same season, and untrained staffs are a constant worry to caterers.

The main object of the survey was to find to what degree the canteens fell short of the new standards set by the Food Hygiene Regulations of 1955. I give below the points to which particular attention was paid and the general conclusions reached.

A detailed schedule of the findings at each school is appended. At each canteen visited I gave a short talk on food poisoning, stressing the dangers of uncovered cuts and abrasions, unclean practices, and the need for reporting certain infectious diseases and septic conditions.

1. The personal cleanliness of the canteen staffs :

This is above reproach, and I did not come across a single person who was not wearing a clean overall and head covering.

2. General state of repair :

The canteens are maintained in a good general state of repair. As a general rule, the canteens are in a good state of decoration and I am advised that they are re-decorated in rotation.

3. Water supply and drainage :

These are satisfactory except where mentioned in the schedule.

4. Sanitary conveniences :

Ideally there should be a separate convenience for the use of canteen staffs, and this is the case in some instances. It is fully realised that it is not always possible or indeed practicable. In some other

schools one compartment is reserved for teaching and canteen staffs and this is preferable to having communal use of conveniences by teachers, canteen workers and children.

5. Staff hand washing facilities and cloakroom accommodation :

The Regulations require the provision of "suitable and sufficient wash hand basins" for the use of canteen staff. The tin pannikin or enamel basin is not considered "sufficient" under the Regulations, nor does the kitchen sink fulfil the requirement. What is envisaged is a proper plumber's fitting with hot and cold water over and connected to the waste water drainage system.

In this respect I would quote from the Ministry of Food's publication "Clean Catering" issued in 1953 :—

"Wash Basins : Catering workers should be encouraged to wash their hands both after visiting the sanitary convenience and whenever necessary during the course of work. They should not use the kitchen sinks for this purpose as this may infect the sinks with germs which can later find their way on to food. Moreover, the sinks will usually not be free at the time when hands need to be washed. Accordingly wash hand basins with hot and cold water laid on, and with good lighting overhead, should be provided in or adjoining the kitchen, and also in immediate proximity to the sanitary conveniences. In a kitchen in which at most ten people are employed, one wash hand basin in the kitchen would be sufficient ; in a large kitchen the ideal arrangement is to have one wash hand basin for each section (e.g., meat, fish, pastry, and so on.)"

The Food Hygiene Regulations of 1955 seem to be based on the practices recommended in this booklet.

For the normal size of canteen I think it is sufficient for the wash hand basin to be placed in or near the sanitary convenience compartment, but I feel that an additional one should be installed in the actual kitchen in the larger canteens (say those handling over three to four hundred meals per day).

Clothes hanging accommodation is also called for in the form of lockers or cupboards if there are no facilities for hanging outdoor clothes elsewhere than in the food room.

These items are referred to under the school headings in the schedule.

"Wash your Hands" Notices.

Some difficulty is experienced over the placing of these notices to the best advantage. My recommendation is that they be placed on the back of the sanitary convenience door or on the wall facing the

pan. This may not always be possible where there is no specific sanitary convenience reserved for canteen staff, in which cases the notice should be placed near to and facing the door to the canteen kitchen.

In some instances the Wash Hands Notices had been destroyed or had not been renewed after re-decoration of the canteen. This requirement is statutory and care must be taken to see that these notices are renewed when dilapidated and after re-decoration.

6. First Aid Boxes :

These were provided in most cases. The stock of materials varied but each was replenished as necessary as soon as it was reported to the School Meals Supervisor. Advantage was taken of the first visit to impress the need to use waterproof dressings to cover small scratches and cuts, also of the necessity to keep the First Aid Box well stocked at all times.

Ideally, I would like to see the First Aid Box in the form of a fixed cupboard on the wall, prominent, accessible to all and well stocked.

7. The Cooking Equipment :

In every case this was in good order and maintained in a scrupulously clean condition.

8. Sinks for washing food and equipment :

These were adequate in most cases and provided with a satisfactory supply of hot and cold water. (See schedule for exceptions).

It was noted with satisfaction that the wooden sink splashbacks are gradually being replaced by tiles. I would make a suggestion here that when draining boards are being renewed they be made detachable so that they can be scrubbed periodically, removed and left to dry out during vacations. The accumulation of slime beneath and around some draining boards on removal must be seen to be believed. This drying out would also make for longer life of the draining boards.

Methods of providing hot water varied and in every case the supply was adequate. I feel it is quite reasonable not to require hot water on tap over the sink in schools where no mains water is supplied.

9. Lighting and Ventilation :

All the kitchens were satisfactory in this respect, except two cases which are reported upon in the schedule.

10. Refrigeration and hot plate facilities :

The Regulations require that certain commonly used foods shall be kept at a temperature either above 145°F or below 50°F unless the food is for immediate consumption. (145°F is regarded as the thermal death point of food poisoning germs, and below 50°F as the temperature when no multiplication takes place.) In practice this means, in the larger canteens, the use of hotplates and refrigerators. In the smaller canteens the conditions do not arise, because the food is usually served direct from the stove.

At the one Central Kitchen (Cybi School, Holyhead) tests show that this Regulation is observed and rinses taken of the containers for sterility or near sterility proved satisfactory.

11. Refuse storage and removal :

This was satisfactory in every case. In no case was refuse allowed to accumulate in the food room.

The pig swill storage presented a problem in the smaller canteens. The bins at present supplied are too big, there being so little swill that the farmer was inclined in some cases to let it accumulate. In other cases the problem was "who was going to clean out the swill bin".

I would recommend the provision of a covered swill pail (capacity 3 gallons) for canteens handling up to thirty to forty meals per day. These would be easier to keep clean and, being easier to handle, would facilitate more frequent emptying.

Food poisoning :

The practice is now well established of keeping samples of each course for 24 hours for examination in the event of a food poisoning outbreak.

SCHEDULE

Matters needing attention—those marked by an asterisk indicate contraventions of the Food Hygiene Regulations 1955. The number of meals shewn is the daily average served.

Aberffraw C.P.S.	64 meals
Kitchen detached from main building.	
Dining room in school building. Hot plate recommended.	
*Wash hands notices required.	
*Wash hand basin required.	
*Staff clothing storage facilities required.	
Amlwch C.P.S.	200 meals.
An additional wash hand basin in the kitchen is recommended.	
Amlwch County—Sir Thomas Jones.	770 meals.
An additional wash hand basin in the kitchen is recommended.	

Amlwch Port C.P.S.

30 meals.

The canteen is very cramped ; the room is a combined dining room/ kitchen and is part of the main school building.

- *Wash hands notices required.
- *Wash hand basin required.
- *Staff clothing storage facilities required.
- *Hot water should be provided over sink.

Brynsiencyn C.P.S.

90 meals.

- *Wash hand basin required.
- *Staff clothing storage facilities required.

Bodorgan C.P.S.

80 meals.

- *Wash hands notices required.
- *Wash hand basin required.

Beumaris C.P.S.

240 meals.

A box required for first aid equipment.

Beumaris County Secondary.

- *Wash hands notices required.
- *Wash hand basin near W.C. compartment not used because of absence of hot water tap over.
- *No clothing storage facilities.
- A box required for first aid equipment.

Bodffordd C.P.S.

53 meals.

- Separate W.C. accommodation for staff desirable.
- *Wash hands notices required.
- *Wash hand basin required.
- *Clothing storage facilities required.

Bryngwran C.P.S.

60 meals.

- *Separate W.C. accommodation for staff desirable.
- *Wash hands notices required.
- *Wash hand basin required.

Bodedern C.P.S.

75 meals.

- *Wash hands notices required.

Carreglefn C.P.S.

40 meals.

- *Wash hands notices required.
- *Wash hand basin required.
- *Clothing storage facilities required.

Cemaes C.P.S.

100 meals.

Drainage is unsatisfactory and causes a nuisance. (Effluent from canteen is discharged into a roadside ditch on the sea side of the main road.)

- *Wash hand basin required.
- *Clothing storage facilities required.

Caergeiliog C.P.S.

105 meals.

- *Wash hands notices required.
- *Clothing storage facilities required.

- Dwyran C.P.S.** 55 meals.
 The canteen is very cramped ; the room is a combined dining room / kitchen and part of main school building.
 *Wash hands notices required.
 *Wash hand basin required.
- Ty Mawr C.P.S.** 24 meals.
 Separate staff W.C. desirable.
 *Wash hands notices not displayed.
 *Wash hand basin required.
 *Clothing storage facilities required.
 As this school is on the mains water supply it would be reasonable to require the provision of hot water on tap over the sink.
- Gaerwen C.P.S.** 80 meals.
 *Wash hand basin required.
 *Clothing storage facilities required.
 A box required for first aid equipment.
 Ventilation in this canteen should be improved.
- Gwalchmai C.P.S.** 108 meals.
 Separate staff W.C. desirable.
 *Wash hand basin required.
 *Clothing storage facilities required.
- Holyhead—Llaingoch.** 35 meals.
 *Wash hands notices not displayed.
 As this school is on the mains supply the provision of hot water on tap over the wash hand basin is a reasonable requirement.
- Holyhead—Thomas Ellis.** 250 meals.
 Satisfactory in all respects.
- Holyhead—County Secondary.** 480 meals.
 *The wall plaster and distemper were peeling badly.
 *Ventilation cannot be said to be satisfactory.
 As this school is on the mains supply the provision of hot water on tap over the wash hand basin is a reasonable requirement.
 In a canteen of this size, I would suggest placing an additional wash hand basin in the kitchen.
 *Clothing storage facilities are unsatisfactory.
 *Woodwork of 2 draining boards is defective.
 *Insufficient hot plates.
- Holyhead—Cybi.** 700 meals.
 Satisfactory in every respect.
- Holyhead—St. Mary's R.C.** (Serving and scullery only.)
 *Wash hands notices required.
 *Staff wash hand basin required.
 *Clothing storage facilities required.
- Holyhead—Kingsland.** (Serving and scullery only.)
 *Wash hands notices required.
 *Staff wash hand basin required.
 *Clothing storage facilities required.

Holyhead — Park. (Serving and scullery only.)

- *Wash hands notices required.
- *Staff wash hand basin required.

Llanfachraeth C.P.S. 43 meals.

- Separate staff W.C. desirable.
- *Wash hands notices required.
- *Wash hand basin required.
- *Clothing storage facilities required.
- A box required for first aid equipment.

Llanddeusant C.P.S. 52 meals.

- Separate staff W.C. desirable.
- *Wash hands notices required.
- *Wash hand basin required.
- *Clothing storage facilities required.
- A box required for first aid equipment.

Llanfairynghornwy C.P.S. 30 meals.

- Separate staff W.C. desirable.
- *Wash hand basin required.
- *Clothing storage facilities required.

Llanrhyddlad C.P.S. 30 meals.

- *Wash hand basin required.
- *Clothing storage facilities required.

Llanfaethlu C.P.S. 56 meals.

- *Wash hand basin required.
- *Clothing storage facilities required.

Llanfechell C.P.S. 73 meals.

- Separate staff W.C. desirable.
- *Wash hands notices required.
- *Staff wash hand basin required.
- *Clothing storage facilities required.

Llanerchymedd C.P.S. 100 meals.

- *Wash hands notices required.
- *Wash hand basin required.

Llandrygarn C.P.S. 60 meals.

- Separate staff W.C. desirable.
- *Wash hands notices required.
- *Wash hand basin required.
- *Clothing storage facilities required.

Llanallgo C.P.S. 75 meals.

- Separate staff W.C. desirable.
- *Wash hands notices required.
- *Wash hand basin required.
- *Clothing storage facilities required.
- A box required for first aid equipment.

- Llanbedrgoch C.P.S.** 48 meals.
 Separate staff W.C. desirable.
 *Wash hand basin required.
 *Clothing storage facilities required.
- Llandyfyrdog C.P.S.** 28 meals.
 *Wash hands notices required.
 *Wash hand basin required.
- Llanddona C.P.S.** 42 meals.
 Separate staff W.C. desirable.
 *Wash hands notices required.
 *Wash hand basin required.
 *Clothing storage facilities required.
- Llangoed C.P.S.** 90 meals.
 Separate staff W.C. desirable.
 *Wash hands notices required.
 *Wash hand basin required.
 *Clothing storage facilities required.
 *Canteen walls dusty and dirty.
 *Vegetables storage is unsatisfactory.
- Llanfairpwll C.P.S.** 100 meals.
 Separate staff W.C. desirable.
 *Wash hands notices required.
 *Wash hand basin required.
- Llandegfan C.P.S.** 67 meals.
 New canteen in course of erection.
- Llanddaniel C.P.S.** 45 meals.
 *Re-decoration required.
 *Wash hand basin required.
 *Clothing storage facilities required.
 *Sink requires re-setting—Wooden splash back defective.
- Llangaffo C.P.S.** 30 meals.
 *Wash hand basin required.
 *Clothing storage facilities required.
 A box required for first aid equipment.
 As this school is on the mains supply the provision of hot water on tap over the wash hand basin is a reasonable requirement.
- Llangristiolus C.P.S.** 73 meals.
 Separate staff W.C. desirable.
 *Wash hands notices required.
 *Wash hand basin required.
 *Clothing storage facilities required.
- Llangefni C.P.S.** 300 meals.
 *Wash hand basin required.
 *Wash hands notices required.

Llangefni County Secondary.	850 meals.
*Walls due for re-decoration, distemper peeling. *Absorbent asbestos bench surfaces in larder. *Ventilation of dry stores not efficient. An additional wash hand basin in kitchen is recommended.	
Llangefni Infants (Penrallt).	30 meals.
*Defective draining board.	
Menai Bridge C.P.S.	145 meals.
Satisfactory in every respect.	
Newborough C.P.S.	80 meals.
Wash hands notices should be on inside of W.C. door. *Wash hand basin required. *Clothing storage facilities required. A box required for first aid equipment. *1 wash up sink worn and glazing defective.	
Pentraeth C.P.S.	75 meals.
Separate staff W.C. desirable. *Wash hands notices required. *Wash hand basin required.	
Pencarnisiog C.P.S.	35 meals.
*W.C. pan requires renewing. *Wash hands notices required. *Staff wash hand basin required.	
Penysarn C.P.S.	68 meals.
Separate staff W.C. desirable. *Wash hand basin required. *Clothing storage facilities required.	
Rhosmeirch C.P.S.	25 meals.
*Wash hands notices required.	
Rhosneigr C.P.S.	130 meals.
*Re-decoration due. Separate staff W.C. desirable *Wash hands notices required. *Wash hand basin required. *Clothing storage facilities required.	
Rhosybol C.P.S.	32 meals.
*Wash hands notices require renewing.	

Rhoscolyn C.P.S.

96/100 meals.

- *Wash hands notices required.
- *Wash hand basin required.
- *Clothing storage facilities required.

Talwrn C.P.S.

50 meals.

- Separate staff W.C. desirable.
- *Wash hands notices required.
- *Staff wash hand basin required.
- *Clothing storage facilities required.
- As this school is on the mains supply the provision of hot water on tap over the wash hand basin is a reasonable requirement.

Tynygongl C.P.S.

50/60 meals.

- *Distemper peeling badly on gable wall.
- Separate staff W.C. desirable
- *Wash hands notices required.
- *Wash hand basin required.

Valley C.P.S.

75 meals.

- Accommodation is very cramped in kitchen.
- *Wash hands notices required.
- Additional sink for washing food and equipment required.

I. WYNN JONES

County Health Officer.

Survey of Ability and Attainments of Children aged 8 to 9½ in the Holyhead Schools, 1956.

By G. A. V. Morgan, Ph.D., Senior Educational Psychologist.

1. The Children Tested.

During the period June to October 1956 a survey was made of the ability and attainments of children in the age group 8 to 9½ in the schools of the Holyhead area. For the purpose of this survey the "Holyhead area" was in fact the catchment area for the Rhoscolyn day special school and included not only schools within the Holyhead urban area but also Caergeiliog, Llaingoch and Valley.

The group to be tested were all children in 9 schools who were aged between 8 and 9½ on the 30th June. 316 children (152 boys, 164 girls) were in fact tested on the non-verbal test used to assess ability.

2. The object of the survey

The survey was requested by Dr. Wynne Griffith, Principal School Medical Officer, and was carried out by the North Wales Child Guidance Clinics (School Psychological Service), with his support and assistance.

The main aim of the survey was to ascertain rapidly, by means of group tests of ability and attainment, the children who, because of their dullness and backwardness in reading or arithmetic appeared to need special educational treatment.

On the basis on this preliminary "screening" these children have been referred for more detailed individual examination and assessment by their teachers (by completion of Form 3 H.P.), and the officers of the school medical service so that recommendations can be made for placement in the day special school at Rhoscolyn or other placement. Where necessary, children have also been referred to the Child Guidance Clinic for fuller investigation of their difficulties.

When testing was completed, results for each child were discussed by Dr. Wynne Griffith and the psychologist responsible for carrying out the survey before decision was taken.

The survey has, however, some important general educational implications. It has provided some evidence on the level of ability and attainments in the schools in the age-group tested. It has, moreover, brought to notice children who, though not intellectually backward, are retarded to some degree in either reading or arithmetic—children who have a fair chance of responding to special attention in school or remedial teaching. In addition, it has identified children who, though relatively slow, appear to be working well up to their own level in the basic subjects. Thus, a yardstick has been provided

for each pupil, enabling his teachers to determine how he stands in relation to others in his class in ability and, roughly speaking, what he should be capable of in reading and arithmetic.

It is hoped that these facts and discussion of their significance will be of help to teachers in assessing their pupils' individual needs and progress. Scores of each pupil tested are being made available to the schools and, where necessary, the psychologist hopes to discuss individual cases with the teacher.

3. The tests used and difficulties in testing.

Three main tests were employed: the Non-Verbal Test 5 and Mechanical Arithmetic Test 1A (National Foundation for Educational Research) and the Burt-Vernon Word Recognition Test. The first two are group tests, and can be administered to a whole class at one time; the word-recognition test has to be given to each child individually.

Tests were provided by the Principal School Medical Officer, when it had been decided which would be most likely to be suitable.

The non-verbal test of ability was used in an attempt to avoid as far as possible a child getting a low and misleading score, because he had a poor vocabulary, was a poor reader or bilingual.

The non-verbal test is composed of various types of problem (finding similarities, analogies, completing series and cypher, in diagrammatic form, not requiring the use of words) which the child had to reason out. A practice test preceded each test, so that one could be reasonably sure that each child understood fully what he had to do.

The test appeared to work well and to give a fair estimate of each child's ability (in so far as one could check, in children referred for more detailed examination, on an individual scale of intelligence). The average score for the test for all schools is also remarkably close to the average of the large group on which the test was standardized. Recent research has shown that bilingual children tend to be handicapped, in comparison with monoglot children, in working verbal and non-verbal tests of ability. Even if a child was handicapped by language difficulties, however, it was unlikely that, in this survey, he lowered his score to such a degree as to give a wrong assessment of the intellectual category (superior, bright, average, dull, very dull) into which he should come.

Discussion of the child's result and knowledge of his teacher's estimate of his ability and progress ensured that the assessment was just.

The arithmetic test is a simple graded mechanical test of the four rules and basic arithmetic knowledge—money, weights, capacity, measure—covering the type of work done by the age group 7 to 14 in a large sample of children used for standardizing the test. Although, because it has been devised for general use, it does not fit any specific scheme of work, it appears to give a good estimate of the level the child has reached in arithmetic and his standing relative to others of his own age. If any bias occurs because of an individual item requiring knowledge not in the syllabus, it is clear that all children graded would be equally affected by this.

The test of word-recognition is one of those normally used to assess the level of a child's reading attainment. It tests comprehension indirectly through the child's vocabulary and ability to recognise and analyse words.

The non-verbal test scores were turned into standard scores, which hold age constant, have a mean of 100 and a standard deviation of 15. These scores are approximately equivalent to "intelligence quotients", therefore. The arithmetic test scores were transformed to similar standard scores by means of the conversion tables. To make the reading scores comparable, they were turned into "quotients", as well by dividing each child's reading and arithmetic "age" by his chronological age.

The classes tested varied greatly in linguistic background according to school. In one or two schools, practically all pupils tested were nearly monoglot English speaking. In other schools, children were bilingual but primarily Welsh speaking, and in other the English speaking children and primarily Welsh speaking children were in separate classes. Where children were primarily English speaking, the tests were administered in English, and where primarily Welsh speaking, in Welsh. Where there appeared any doubt, instructions were given first in English and then in Welsh. The latter complication arose only in one or two instances, in the smaller schools.

Except where, in the view of the head-teacher, the children had insufficient grasp of Welsh to make it worth-while, a Welsh word-recognition test was also administered. This is the word-recognition test constructed and standardized by Mr. G. Evans, Deputy Director of Education, Caernarvonshire. A Welsh word-recognition test suffers from certain drawbacks, as a test of reading, however. Because the language is phonetic, the difficulty of words has to be increased by increasing their length for the most part. Up to the reading age of 8, the test appears to function very satisfactorily, but at higher ages the child with a good grasp of phonics tends to get correct words which it is unlikely that he knows at first hand or knows the meaning

of. This partly accounts for tendency to high scores found. The test was, however, very useful in detecting children distinctly retarded in reading, and ensured that no Welsh speaking child who had poor English reading ability was penalized simply on account of his language difficulty.

As a matter of practical organization, it was found that the use of an individual reading test or tests with practically every child took up a considerable amount of time—between 5 and 10 minutes a child. In any further testing it would seem better to give group tests of reading comprehension, and to select for individual testing with the word-recognition test only those children who are distinctly retarded in reading (who would probably fail to score on the group test).

There are available several comprehension tests in English suitable for this group. It appears that a Welsh reading comprehension test could also be made available.

As noted above, the age-group 8 to $9\frac{1}{2}$ was tested, since it is from this age-group that selection can best be made of pupils who are beginning to show significant retardation in their basic educational skills. Once the survey of such an age-group has been completed, it would seem most economical to continue the survey annually, since only the children becoming 8 at the given date in the following year need be tested, i.e., about 100 instead of 300.

4. Results of the survey

Average scores for the various tests are listed by schools in the table. This section will deal with certain general conclusions emerging from these scores.

The general average of all schools on the non-verbal ability test was 99.3, which is very close to the expected average score. There was, as one would expect, some variation between schools because of the social-cultural neighbourhood from which pupils are drawn. The school with the highest non-verbal score (110.7) was some 26 points above that with the lowest non-verbal score (84.3). It is worth noting that the average of this latter school is almost exactly on the borderline usually assumed between the average and the dull group.

It is also interesting that there is a tendency for the three schools outside the urban area of Holyhead and near the R.A.F. Station, Valley, where there is a large "immigrant" school population to have higher than average scores. It seems probable that this is due to the fact that the parents of these children are to a considerable degree selected, because of their work, to be above-average in ability and skill. There are also more "English speaking" children in these schools, and the difference in scores between them and the other schools may partly reflect the effects of bilingualism.

The range of scores of individual children is from 137 to 70, that is from superior (university graduate level) to dull (feeble-minded)—in fact, the whole range of scores permitted by the standardization of the test.

There appeared to be no real difference between boys and girls in ability, though in all but one school the boys have scored very slightly higher.

Attainment : The averages for the arithmetic test fell below those for the ability test in all but one school, and the general average for all schools (93.3) is distinctly below that for the ability test.

This suggests that there is, on the whole, a greater degree of retardation in arithmetic than one would expect or—to phrase the matter in another way, that there are more pupils who are retarded to some degree in arithmetic than one would expect.

The average of the highest scoring school was 100.4, the average of the lowest 83.3, a difference of 17 points. As one would expect, there is a general tendency among children taken individually for ability and arithmetic scores to be close together. Among schools, the variation between ability and arithmetic appears more marked, schools which ranked fairly low when ability-test averages are considered coming high when ranked on arithmetic average. This reflects complex differences between schools relating to social background of children, method and efficacy of teaching.

Individual scores in arithmetic ranged from 134 to 62, i.e., from an arithmetic age of $12\frac{1}{2}$ or more to one of 6 years or less.

The general average for the English reading test was 97.5, once again below the average for ability, but only slightly so.

The highest school average was 111.7, the lowest 81.8. The difference between the highest and lowest school was more marked, therefore (nearly 20 points) than in arithmetic. There is a much wider spread of scores in reading than there is in arithmetic, the actual range of individual scores being from 154 to 53. This suggests that there is a fair proportion of children whose reading is superior to their ability level and that there is a larger proportion whose reading falls well below their ability level. Study of individual children's scores showed that, where they were retarded, retardation tended to be more severe in reading than in arithmetic.

The reasons for the variations between individuals and between schools in reading ability are again manifold and complex. It is probable, however, that poor social background (as distinct from lack

of ability) and language handicap, where this exists, operate more strongly in producing marked retardation in reading than they do in arithmetic.

On school average, the girls were some 5 points superior to the boys in reading, a distinct difference, though probably not significant statistically. This superiority of girls in verbal attainment is in line with the research findings.

It was expected that the Llaingoch school would fall well below the others in the sample in average ability level, and this is borne out by the test results. This school draws its children mainly from a rather isolated little community, where it is probable that there is a high degree of intermarriage, and it seems to be a focus of backwardness.

Comparison of the ability score and attainment scores show that, on average, these particular children are working somewhere near the level one would reasonably expect. On the Welsh word recognition test they in fact had a school average of 99. This tends to confirm that this test depends on mechanical phonetic knowledge to a large degree, since the probability is that these children's vocabulary is more restricted than that of more able children. On the other hand, the fact that this score is so much higher than the others suggests in addition that Welsh background and good teaching have played a large part.

In comparing average scores for schools, it should be remembered that some averages, for the smaller schools, are based on small numbers of children, so that small differences—say below 5 points—should not be regarded as significant.

5. Attainment in Welsh reading and linguistic background.

Averages for Welsh word recognition scores are not quoted for Caergeiliog, St. Mary's and St. Cybi. In Caergeiliog School so many children were English speaking that it was clear that any average score reported would be misleadingly low.

The same is true of St. Mary's, where it was judged best to omit use of the Welsh test altogether. It proved impossible to test all children in the St. Cybi School, with the individual reading tests because of the large number involved, so teachers were asked to select, rather liberally, children they considered backward in reading. Here, therefore, averages for both reading tests are omitted.

As far as can be judged from inspection of school averages and individual scores, attainment in Welsh reading depends at this age very much on whether Welsh is the child's first language or he comes from an effectively Welsh home background.

Thus, in one school tested, the Welsh word reading scores were related to the child's ability in the "Welsh" class and tended to run parallel with the English word reading score, e.g., non-verbal score 98, English reading 99, Welsh reading 97. In the "English" stream, however, the children were, on the whole, unable to tackle words beyond the 6 year level at most. In another school, Park, Welsh word reading was consistently well below English except for isolated individuals, and it is clear, from other evidence, that these children have no true Welsh linguistic background.

Elsewhere (outside the urban area of Holyhead) where there appeared to be a majority of children in the school who were primarily Welsh speaking—and where one would expect more Welsh to be spoken in the community outside the school—there was, as far as could be judged by the test results and observation of the school, a much higher level of competence in Welsh reading, with even a tendency for primarily English speaking children to be "swept along" into higher attainment in their second language.

The level of attainment in Welsh, and its relationship to attainment in English, seems to depend, therefore, very much on the individual school observed and on the linguistic background in the community from which children are drawn.

It would be of considerable interest in any subsequent survey to ascertain objectively, in greater detail, the linguistic background of each child (in terms of the language normally used at home and in play with other children) in order to shed more light on the observations made on the basis of this survey, which are on general impression only.

6. Screening of children for further investigation.

In considering the scores of individual children with a view to further investigation, the non-verbal score was considered first. On an individual scale of ability, an intelligence quotient of 85 is normally assumed as the borderline between the average and the dull group, and the Ministry of Education's definition of the dull and/or backward child gives intelligence quotients of 85 and 55 as the upper and lower ability limits of the educationally subnormal group. A standard score of 85 was similarly taken as the approximate borderline on the non-verbal test. It is possible that children in verbal and numerical attainments may well score higher on a non-verbal test than on an individual scale requiring knowledge of vocabulary, information and verbal reasoning—so that the borderline in the non-verbal test might fall lower than it would on an individual scale. On the other hand, a child has a better opportunity of scoring near his best on an individual scale, when he can be encouraged, and where time limits are as a rule

generous, whereas a group test score depends to some extent on the child being motivated to work hard and swiftly over a short period of time and may always be affected by failure—despite repetition and practice—to grasp the essential instructions.

It was considered that these factors would tend to balance one another out, and to take the standard score of 85 as the borderline.

In any event, children falling near the borderline and appearing, according to the evidence of the other tests and teachers' estimates to be reasonably well assessed, were tested on an individual scale by the school medical officer or psychologist. Discussion, individual re-assessment, and consideration of teachers' opinions ensured that no injustice would be done.

All children whose attainment scores (arithmetic and reading) fell 10 points or more below their ability score were listed as possible candidates for further examination. These are children who are dull (by the definition given) and retarded.

The approach was not rigid. Thus, if a child was dull and severely retarded in only one attainment, though at the level one would expect in the other, it was often considered on available evidence that he should be re-examined with a view to giving him an opportunity of entering the special school.

Again, where children were found to be very dull, e.g., with a standard score of 70 or below on the non-verbal test, even if their attainments appeared well up to their own level, consideration was given to the advisability of placing them in the special school after re-examination, since the organization of classes and approach to learning in this school seems more appropriate to such slow children than are the methods of the schools dealing with the average child.

7. The need for "recovery" classes.

The most difficult decisions were encountered when one came across the child of average or even markedly above-average ability who was backward in either reading or arithmetic or both. Strictly speaking such children have no place in the special school intended for duller children although it is possible to arrange for them to go there to receive the remedial teaching they require. Such children, where their retardation in basic subjects persists, do require a proper remedial approach rather than just "more reading" or "more sums", i.e., coaching. What such children in fact need is a small "recovery" or "opportunity" class, no more than 20 in number, which can be further grouped according to need and where individual teaching can effectively be given. Experience shows that such a class needs to be organized separately from the main streams, i.e., it is less effective to

have such pupils as part of another class for formal lessons or to "call them out" from main classes for short coaching periods.

The difficulty in forming such a class is that it requires, in fact, a room of its own and a teacher of its own who needs to be enthusiastic and experienced in teaching the slow-learning and difficult child even if not specially trained, and such a class makes more demands than the ordinary class on apparatus and equipment.

Such a class can be fully organized for remedial teaching in the proper sense that is, permitting the detailed individual study of each child in the group, with individual and group teaching based on his individual weaknesses and strengths, and with the approach to learning very broadly based, from art and activity methods—applied to language and number work on the one hand, to intensive practice in one particular item of learning on the other.

Even where a remedial class in the full sense cannot be set up, grouping of children in such a way as to allow diagnosis of their main difficulties and teaching at a lower or slower level is useful.

A stitch in time saves nine, and early identification of the children who, though not educationally sub-normal in the proper sense because of their ability level, have become or are becoming educationally retarded allows of successful handling of remediable backwardness.

At present it does appear that there is not in every school provision for these children.

A child who is beginning to fail in reading or arithmetic to a significant extent is usually well known to his teachers, but where the child's ability level is unknown, it may well be that his teachers set rather too high or too low a target for him in terms of reasonable attainment.

It is for this reason that it seems so important to have some kind of objective yardstick of ability and attainment for each child.

Comments and acknowledgments

Teachers in the schools included in this survey were interested and co-operative. Inevitably, however, when a survey is conducted "from the outside", there was a need to be reassured about the purposes of the testing. One feels that work of this kind is most effective in its long-term results when there is an opportunity to discuss its implications and findings, preferably in terms of actual children, and when the teachers themselves can take some active part, e.g., by undertaking part of the testing. In this way interest is stimulated and skills are developed which the teacher can apply for himself in the classroom. The concepts of objective ability and attainment level become more real in this way, and the teacher can learn to apply tests in the classroom with an appreciation of their usefulness and their limitations. Experience shows that this leads to more interest in the individual child.

From the point of view of the North Wales Child Guidance Clinics this survey represents an extension of their work in a new form, outlined in the annual report for 1955—a School Psychological Service intended to work closely within or in contact with the schools and the school health and education services. I have enjoyed the close and cordial co-operation with Dr. Wynne Griffith and his staff. I am grateful to the head teachers and class teachers in all schools for their willingness to make arrangements for testing, their useful information about children in need of help, and their general interest. Most of the testing was carried out by myself and the scoring and tabulation of results by the clerical staff of Dr. Wynne Griffith's department, who did this very efficiently. I must acknowledge, however, the help given by the staff of the St. Cybi School in administering, under supervision, the arithmetic test, by Mr. Williams of the Reverend Thomas Ellis School for helping to administer the Welsh word-recognition test in that school, and by Mr. Karle, my colleague, for administering the English word-reading test in four of the schools last tested.

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AVERAGE SCORES FOR SCHOOLS

	Non- Verbal 5	Arithmetic	English Reading	Welsh Reading
Caergeiliog	110.7	96.2	94.7	—
Kingsland	106.7	97.4	96.9	80.5
Valley	106.4	100.4	94.6	99.7
Rhoscolyn	103	94.5	111.7	99.3
Park.....	101.4	93.1	94.6	70.9
St. Cybi	97.3	89.7	—	—
Thomas Ellis	96.8	94.9	101.6	110.1
St. Mary's	96	96.6	98.1	—
Llaingoch	84.3	83.3	81.8	99
Range of Scores.....	137-70	134-62	154-53	145-61

Both word recognition scores omitted for St. Cybi, as in view of the large size of this School, only selected children, suspected of backwardness, tested in reading. Reporting these scores would give much too low an average score to be representative of the school.

Welsh Word-Recognition score omitted for Caergeiliog and St. Mary's in view of the small number of Welsh speaking children in these schools.

The Welsh Word-Recognition test depends much more on phonic mastering, the English word recognition more on actual word-knowledge, as one would anticipate.